EFFECTIVENESS OF ADMINISTRATIVE SERVICES IN SLOVAKIA

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THE TODAY SITUATION
AIM OF THE PAPER

Is to verify previous findings that community efficiency increases with the number of inhabitants to a certain point (economies of scale) and consequently decreases (the municipality becomes too large what causes diseconomies of scale)
DATA

Data

spendings of local governments, COFOG, DataCentrum Ministry of Finance of the SR
number of delegated competences, Jint municipal offices, Ministry of Interior of the SR

The sample was reduced of the city districts of Bratislava and Košice and the municipalities, which, as expenditure in COFOG class 01.1.1, stated either zero values or total expenditure. The total sample size decreased from 2926 to 2830 observations.
Methods

**DEA – SBM_I_V**

choice of *slack based model* is based on inappropriate changes between inputs and outputs

effectiveness of self-government should increase by reducing inputs - administration costs

Variable RTS – general assumption (of this paper)
Simar – Wilson Test

suitability for regression with a censored variable on the left hand side and at the same time it performs better results with a DEA score as a dependent variable than Tobit regression

Dummy regression

dummies were used as explanatory variables for 10 size categories (up to 250 inhabitants, 251-500, 501-1000, 1001-2000, 2001-3000, 3001-4000, 4001-5000, 5001-10000, 10001-20000 and 20001-50000 inhabitants)
DEA MODELS

Model 1 (Simar – Wilson test); 1DEA, 10 dummies

I1: COFOG 01.1.1 and I2: the number of delegated competencies.
O1: other municipal expenditure (total expenditure excluding COFOG 01.1.1) per capita.

Model 2 (effectiveness comparison); 1+11 DEA

I1: COFOG 01.1.1 and I2: the number of delegated competencies. Outputs were O1: other municipal expenditure (total expenditure excluding COFOG 01.1.1) per capita and O2: population
## RESULTS SIMAR-WILSON TEST

### Simar & Wilson

| DEA_sc | Coef. | Std. | z    | P>|z|  | 95% Conf. Interval |
|--------|-------|------|------|-----|---------------------|
| do250  | 0.0327324 | 0.0412079 | 0.79 | 0.427 | -0.0480336 | 0.1134985 |
| d251500| 0.0229463 | 0.0401847 | 0.57 | 0.568 | -0.0558144 | 0.1017069 |
| d5011000| 0.031865 | 0.040811 | 0.81 | 0.416 | -0.0468016 | 0.1131747 |
| d100112000| 0.0540948 | 0.046289 | 1.33 | 0.183 | -0.0255364 | 0.133726 |
| d200113000| 0.0956221 | 0.0405504 | 2.36 | 0.018 | 0.0161448 | 0.1750995 |
| d300114000| 0.0940389 | 0.0470181 | 2 | 0.045 | 0.0018851 | 0.1861928 |
| d400115000| 0.1046813 | 0.0447752 | 2.34 | 0.019 | 0.0169236 | 0.1924391 |
| d5001110000| 0.0717334 | 0.0428311 | 1.67 | 0.094 | -0.012214 | 0.1556809 |
| d1000120000| 0.0236742 | 0.0380876 | 0.62 | 0.534 | -0.0509761 | 0.0983245 |
| d2000150000| 0.0569994 | 0.0454915 | 1.25 | 0.21 | -0.0321623 | 0.1461611 |
| _cons  | 0.0014661 | 0.0404513 | 0.04 | 0.971 | -0.077817 | 0.0807491 |
| /sigma | 0.1098897 | 0.00143 | 76.84 | 0 | 0.1070868 | 0.1126925 |

Number of efficient obs = 6
Number of bootstr. reps = 50
Wald chi2(10) = 196,156
Prob > Chi2(10) = 0
RESULTS POLYNOMIAL REGRESSION OF EFFECTIVENESS

Polynomial regression Slovakia

$R^2 = 0.14031$
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CONCLUSION 1

efficiency grows with the size of a municipality up to a size category of 20-50 thousand inhabitants, then begins to decline;

efficiency within the size category is growing along with the population;

municipalities with a population of up to 2,000 will not achieve greater efficiency until a qualitative change occurs due to passing the limit of population 2,000 (this will allow the provision of administrative and public services at a different level);

municipalities from 2,000 to 10,000 inhabitants can make the most profit from increasing the population (also by joining other municipalities; only in this category is according to the Simar - Wilson test the increase of efficiency due to population growth statistically significant);
in municipalities in the size category of 10-20 thousand inhabitants the population growth does not bring additional added value (other kind of services or more complex services) ;

municipalities of the size category of 20-50 thousand inhabitants are most effective (in the Slovak case) ;

in the size category of municipalities of more than 50,000 inhabitants, population-size efficiency declines, but they produce more complex administrative and public services.
RECOMMENDATIONS
TO INCREASE THE EFFICIENCY OF THE PUBLIC ADMINISTRATION SYSTEM IN SLOVAKIA

Small municipalities (according to the results of this paper smaller than 2,000 inhabitants) should either reduce the number of performed (assigned) competences or join other municipalities to create administrative units of more than 2,000 inhabitants. Joining into units smaller than 2,000 inhabitants brings actually only a result which can be expressed such as “doing (quite) nothing more efficient”.

The municipalities from 2,000 to 20,000 inhabitants should join into larger administrative units.

In the case of municipalities from 20,000 inhabitants the policy should focus to the number (width) of provided public and administrative services where new services could and should be introduced.
WHAT IS ALREADY DONE...
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